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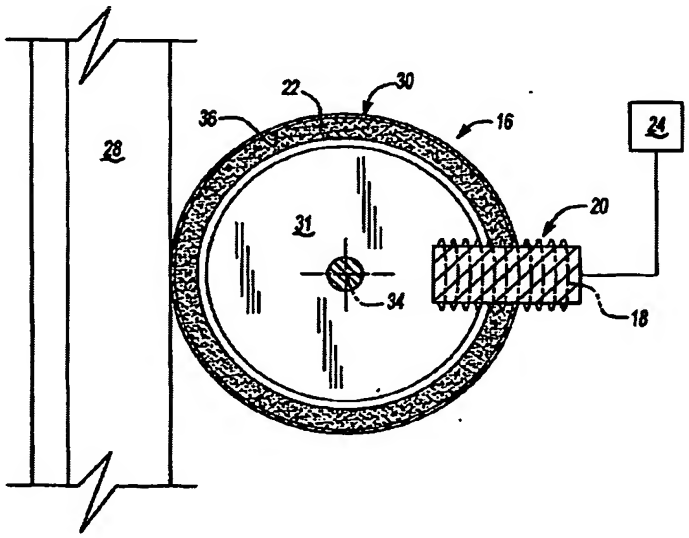
(54) Title: ELEVATOR WITH ROLLERS HAVING SELECTIVELY VARIABLE HARDNESS



(57) Abstract: An elevator system includes a roller (16) having a hardness that varies responsive to a magnetic field (20). The roller (16) rolls along a guide rail (28) to maintain a desired orientation of the elevator car (12). In one example, the roller (16) includes a membrane (30) defining a generally annular chamber (36) containing fluid (22) that changes viscosity responsive to changes in the magnetic field (20). The rollers (16) are associated with at least one magnetic field generator (18) that generates a magnetic field (20) of a selected strength. Varying the magnetic field varies the hardness of each roller (16) to control vibrations of the elevator car (12) to improve ride quality.

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